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Undermined Promise

*Reclamation and Enforcement
of the*
**Surface Mining Control and
Reclamation Act**

1977-2007



*Natural Resources
Defense Council*

*Western
Organization of
Resource Councils*

Undermined Promise is a joint publication of the Natural Resource Defense Council (NRDC) and the Western Organization of Resource Councils (WORC).

NRDC is one of the nation's most effective environmental action groups. It uses law, science and the support of its 1.2 million members and online activists to protect the planet's wildlife and wild places and to ensure a safe and healthy environment for all living things.

WORC is a regional network of seven grassroots community organizations that include 9,500 members and 45 local chapters. WORC is committed to building sustainable environmental and economic communities that balance economic growth with the health of people and stewardship of their land, water, and air resources.

Authors

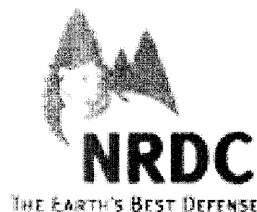
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Reclamation and Enforcement of the *Surface Mining Control and Reclamation Act*

Introduction

Coal is often referred to as the nation's cheapest and most abundant fossil fuel. But, according to a recent National Academy of Sciences report, the United States may not have nearly as much coal as is popularly believed, and mining the remaining resources may be more dangerous for workers and the environment than current operations.¹ Nor is coal cheap, if the full costs of coal extraction and use are considered. If the external costs of coal—landscapes altered or devastated by mining coal, air and water pollution from mining and burning coal, and the contribution of coal use to global warming—are taken into consideration, the full costs of coal are huge.²

In the 1960s and 1970s, the devastating impacts of strip-mining in the East and the potential creation of “barren wastelands susceptible to continual erosion and disrupted groundwater systems” in the West led to congressional passage of the Surface Mining Control and Reclamation Act (SMCRA),³ which was signed into law by President Jimmy Carter on August 3, 1977. In enacting SMCRA, Congress sought, among other purposes, to assure “that...surface mining operations are not conducted where reclamation...is not feasible,” “that surface coal mining operations are so conducted as to protect the environment,” and “that adequate procedures are undertaken to reclaim surface areas as contemporaneously as possible with the surface coal mining operations.”⁴

This report focuses specifically on the last 10 years of SMCRA's implementation—from 1996 through 2005—in five western states: Montana, Wyoming, North Dakota, Colorado, and New Mexico. Based on data published by the Office of Surface Mining Reclamation and Enforcement (OSM), the federal agency charged with ensuring and overseeing the on-the-ground implementation of SMCRA, this report reveals serious problems with OSM's data and with two critical foundations of Congress' approach to regulating coal mining in the Act: timely and complete reclamation of mined land, and inspection and enforcement of SMCRA's statutory and regulatory requirements.

This report does not address other important implementation issues in this region, including damage to water resources from subsidence or other surface effects of longwall mining and other mining techniques. Nor does it discuss issues in other coal states and regions, such as mountaintop removal in Appalachia. Further investigation of these and other issues not covered here is necessary and appropriate on this, SMCRA's 30th anniversary.

Why now?

Today, 30 years after SMCRA was signed into law, it is appropriate to assess whether the on-the-ground implementation of the statute matches up to its text and the intentions of its authors. When SMCRA was enacted, lawmakers were concerned about the legacy of environmental harm that coal mining had already left in the East and the extensive damage that could result from the planned “expansion of coal surface mining [in the West] on a very large scale,” given the demand at that time for coal.⁵ Today coal demand is much higher than it was 30 years ago, and many observers are predicting dramatically increased production in the near future, this time due to the rising prices and decreased supplies of petroleum and natural gas. Total coal production in the United States expanded by 0.8 percent per year over the past 10 years,⁶ and the U.S. Department of Energy expects future production to grow by 1.1 percent annually until 2015 and by 1.8 percent per year until 2030.⁷ Most of these projected increases are predicted to take place in the West.

Coal mining—including surface-mining, or strip-mining—has severe environmental impacts.⁸ Strip-mining disturbs huge amounts of land in order to remove the coal, interrupts underground aquifers flowing through or above the coal seam, causes negative physical and chemical changes to nearby waters, and leaves a legacy of waste long after mining operations cease.⁹ Mountaintop removal mining devastates the landscape and destroys homes, while associated valley fills threaten to wreak still more damage on affected areas. Coal mines, especially western strip mines, emit large amounts of particulate matter into the air, degrading air quality, while eastern underground mines contribute to global warming by releasing into the atmosphere significant amounts of methane gas that was previously trapped in the coal seams.¹⁰ Health and safety risks are enormous, particularly in the East, and surrounding communities have been seriously harmed.¹¹ Now, more than ever, we need a strong, vigorously enforced SMCRA to help minimize the impacts of coal mining on the environment and the health and safety of local communities.

Objectives of our report

This report has two objectives: first, using reports and data published by OSM,¹² to assess the degree to which SMCRA’s requirements and goals are being achieved by OSM and five western coal mining states; and second, to present policy recommendations that respond to the problems we have identified. Given the narrow focus of this report, these recommendations represent just the beginning of a list of measures needed to address problems with implementation of SMCRA. Oversight committees in Congress, policymakers, and environmental and community

"[T]he environmental and social costs of coal extraction have been enormous. [...] In the arid West, permanent rehabilitation of mined areas is yet to be demonstrated. If not properly conducted, current and planned western coal development could leave behind barren wastelands susceptible to continual erosion and disrupted groundwater systems, significantly diminishing the productivity of agricultural areas. By imposing workable reclamation standards nationwide through the enactment of [SMCRA], the unnecessary degradation of land and water resources will be avoided as the country makes good use of its abundant coal supply."

**H. R. Rep. 218, 95th Congress,
1st Sess. , p. 57.**

organizations can and should develop much more exhaustive recommendations for improvements in the way coal mines operate as well as the way SMCRA is implemented and enforced as we observe the statute's 30th anniversary.

This report concentrates on coal mining in Colorado, Montana, New Mexico, North Dakota, and Wyoming, the states where the bulk of western coal extraction takes place. In 2005, these five western states produced more than 515 million tons of coal, accounting for 46 percent of all the production in the United States.¹³ One of them, Wyoming, is the nation's leading producer of coal, nearly all of which is strip-mined.

Overview of SMCRA

Our investigation into the implementation of SMCRA in the West's leading coal states uncovered a plethora of environmental issues. This report focuses on two fundamental objectives of SMCRA: timely and effective reclamation of mined land, and thorough inspection and enforcement of SMCRA and its implementing regulations by OSM and state regulatory agencies. Before we delve into our findings, it is important to understand the intentions and goals of Congress when it enacted SMCRA 30 years ago.

Prior to SMCRA, regulation of coal mining was the sole prerogative of individual coal states. In the absence of uniform standards, some states adopted reasonably comprehensive regulatory programs while others had minimal regulations—or none whatsoever. Typically, the states most in need of a strict regulatory regime were also the states least able to create an effective system because of the size and political influence of their coal producers. “In effect, the political and economic power of the coal industry forced many states to compete for the weakest laws and loosest enforcement [to attract coal business] at the expense of their citizens' health, property, and environment.”¹⁴

In response to the public outcry over the severe damage left in the wake of inadequately regulated coal mining, Congress enacted SMCRA, which included benchmark environmental standards applicable to coal mining in all states. SMCRA was intended to level the playing field for the coal industry across the nation while protecting the environment and local communities by requiring that the harmful impacts of coal mining be minimized and that mined lands be reclaimed to their pre-mining condition or converted to a beneficial post-mining use as contemporaneously as possible.

While SMCRA's authors intended that the states would have “primary governmental responsibility” for regulating strip-mining and ensuring reclamation,¹⁵ they wanted the states to exercise this responsibility in a way that would meet “minimum national environmental protection standards.”¹⁶ Toward this end, Congress created OSM within the Department of the Interior and instructed it to promulgate federal regulations establishing minimum standards for the states to meet in developing and carrying out their individual programs on private and state lands.¹⁷ The agency was also charged with approving the state programs and with overseeing their implementation.¹⁸ Once their programs are approved, the states carry them out subject to OSM oversight. States with approved programs can also enter into cooperative agreements with OSM to carry out their programs on federal lands as well. All five states that are the focus of this report have approved state programs and cooperative agreements with OSM.¹⁹

Problems with OSM Data

"[D]ata must serve their intended purposes and stand up to independent, objective external inspection, as well as to internal quality reviews and audits."

The United States Department of the Interior Budget Justifications and Performance Information Fiscal Year 2008. Office of Surface Mining Reclamation and Enforcement. 2007. Pg 14.

To prepare this report, NRDC relied virtually entirely on published OSM reports for the years 1996 through 2005.²⁴ The documents we reviewed included the yearly reports on SMCRA implementation published by the agency, its national annual reports, the reports it published on the 20th and 25th anniversaries of SMCRA, and its annual oversight reports on the regulatory programs of Montana, Wyoming, North Dakota, Colorado, and New Mexico.²⁵ OSM publishes these reports and the data they contain in order to comply with requirements of SMCRA as well as subsequently enacted statutory requirements. For the reports to be useful to elected officials, regulators, and the public, the data they contain must be accurate, consistent, and appropriate. Unfortunately, our review of these reports revealed a number of serious problems with OSM's data.

First, OSM regularly failed to include critically important data in its published reports. For example, the number of acres disturbed by mining is a critical piece of information for anyone interested in reviewing SMCRA's implementation and OSM's performance, particularly with regard to reclamation. Prior to 1998, OSM did not publish the number of mined acres in its annual national reports, although it did publish the number of acres reclaimed.²⁶ From 1998 through 2002, data about how many acres had been affected by mining ("disturbed acres") as well as the number of acres reclaimed were included in annual reports, allowing readers to easily evaluate for themselves how well SMCRA's reclamation goals were being achieved. In 2003, however, the agency stopped including information about acreage mined in its national reports despite its significance.²⁷ Similarly, inspection information for active and inactive coal mines is critical because OSM's regulations impose different inspection requirements for these types of mines.²⁸ Yet OSM failed to separate inspection data according to active and inactive mine status on a consistent basis. Its national reports do not include this information but rather present cumulative data.²⁹ Moreover, 40 percent of the state annual oversight reports the agency published over the past 10 years did not contain these data.³⁰

Second, the data that were published were often problematic. In particular, there were numerous inconsistencies between OSM's annual reports and the state oversight reports upon which they are supposed to be based. According to the agency, "state oversight reports are the sole source of data for the regulatory information and data tables in the Annual Report for those states with regulatory primacy."³¹ Yet when NRDC compared the acreage data published in OSM's national reports with the corresponding data in its annual oversight reports for all five states for the years 1996 to 2005, we found that 35.3 percent of the figures in the national reports did not match the corresponding data in the state reports.³² Indeed, for the years 1998 to 2002, the "disturbed acreage" figures published in the national reports never once matched the corresponding numbers in the state oversight reports.³³ Upon questioning, OSM explained that, because the reporting cycle for the annual report is different from that of the oversight reports, field offices are sometimes forced to give premature or estimated data to the national office for publication in the former.³⁴ However, no explanation was provided for the different reporting cycles or for the agency's failure to amend the annual reports when accurate data were available.

These and other data problems suggest that OSM does not take seriously its responsibility to provide information that "stand[s] up to independent, objective external inspection."

In its role as overseer of state regulatory programs, OSM conducts mine site inspections, reviews permits issued by state regulatory agencies, analyzes state coal mining data, and evaluates whether regulatory programs are meeting statutory and regulatory requirements. OSM's enforcement authority is limited,²⁰ but it is mandated to take enforcement actions in certain situations, including when the state does not act. OSM has the ultimate authority to take over implementation of a state program should the state regulatory agency fail to act in accordance with SMCRA.²¹ Through these responsibilities, OSM is intended to back up the state regulatory agencies and enable them to stand up to the coal mining industry.

Current state of SMCRA

The commitment of both OSM and the states to SMCRA's goals and to its implementation has diminished since the 1970s.²² As this report documents, the enforcement capabilities of the states and OSM have deteriorated over the past 10 years, and OSM's published data clearly show that the statute is not being fully and effectively enforced. Today, state officials and employees who look to OSM for support in upholding the law often find little assistance and in many cases have no choice but to capitulate to pressure from the coal mining industry.²³ Although Congress expected that mining would be a temporary activity on the affected lands and that mined land would be reclaimed as quickly as possible, the rate of reclamation occurring today in the West is shockingly slow. Other problems, especially problems relating to the utility and consistency of data published by OSM, plague the federal program. Overall, despite the passage of three decades, SMCRA's goal of protecting society and the natural environment of the United States from the ravages of coal mining has not been achieved in major respects.

Inspection and enforcement

In enacting SMCRA, Congress recognized the central importance of enforcement to the realization of the statute's goals:

Efficient enforcement is central to the success of the surface mining control program contemplated by [SMCRA]. For a number of predictable reasons—including insufficient funding and the tendency for State agencies to be protective of local industry—State enforcement has in the past, often fallen short of the vigor necessary to assure adequate protection of the environment.³⁵

Thorough mine site inspections and prompt action to correct violations found during inspections are essential to an effective enforcement regime at both the state and federal levels. If the inspections are not thorough and citations are not issued for every violation, statutory and regulatory mandates and goals cannot be met.

Unlike many other environmental laws with largely discretionary enforcement schemes, SMCRA makes agency enforcement mandatory, because Congress found it essential to ensure public health and safety.

Inspection and enforcement requirements

Every year, state regulatory agencies must conduct a minimum number of complete inspections of active and inactive mines—four times the total number of such mines in the state—and a minimum number of partial inspections—12 times the number of active mines.³⁶ Whenever a state inspector finds a violation at a mine, SMCRA requires that s/he issue at least a notice of violation (NOV), giving the mine a maximum of 90 days to abate the violation.³⁷ Both the number of inspections conducted and the number of violations identified are important indicators of the degree to which SMCRA is being implemented on the ground.

Federal inspectors are not required to carry out a specific number of annual inspections.³⁸ However, their inspections must be frequent enough in number and thorough enough in content to permit them to determine whether the state programs are complying with SMCRA and OSM regulations. In states with approved programs, federal inspectors cannot take enforcement actions against mine companies save in emergency circumstances, but, when an inspector sees a violation during an inspection, s/he must issue a notice to the state agency, giving it 10 days to take action with respect to the mine operator.³⁹

30 CFR § 840.11 Inspections by State regulatory authority.

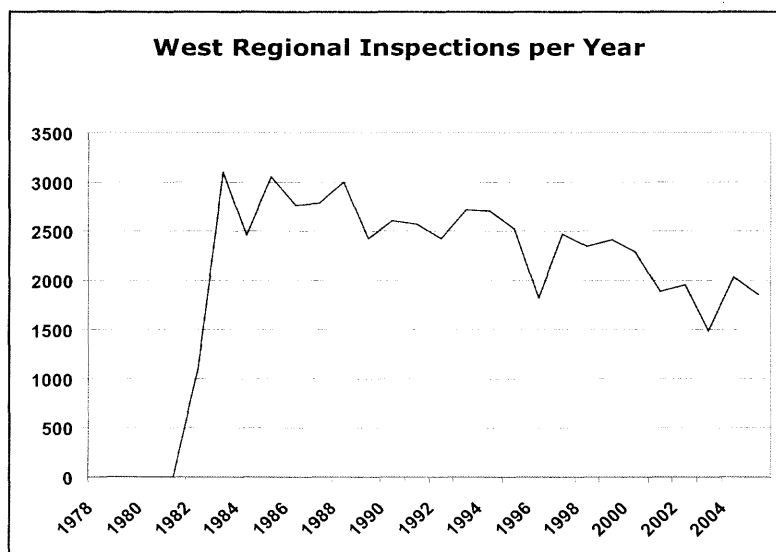
(a) The State regulatory authority shall conduct an average of at least one partial inspection per month of each active surface coal mining and reclamation operation under its jurisdiction. [. . .] A partial inspection is an on-site or aerial review of a person's compliance with some of the permit conditions and requirements imposed under an approved State program.

(b) The State regulatory authority shall conduct an average of at least one complete inspection per calendar quarter of each active or inactive surface coal mining and reclamation operation under its jurisdiction. A complete inspection is an on-site review of a person's compliance with all permit conditions and requirements imposed under the State program, within the entire area disturbed or affected by the surface coal mining and reclamation operations.

OSM Data

Not enough inspections

OSM's published data should allow the public and others to determine whether state agencies are carrying out the requisite number of inspections. As indicated above, annual oversight reports do not consistently contain data on the number of inspections carried out by the state in a given year.⁴⁰ However, 60 percent of the reports issued over the past 10 years did contain the necessary information. These reports revealed that 80 percent of the time, the states failed to conduct the prescribed number of complete inspections, partial inspections, or both. Over just the years for which we have data, the states failed to conduct 27 complete inspections and 2,697 partial inspections.⁴¹ Using the average of those numbers to estimate the number of missed inspections in the years for which OSM did not publish the appropriate data, it appears that the states may have missed 45 complete and 4,495 partial inspections over the years 1996 to 2005. It is virtually certain that violations were missed as the result of these missed inspections. Given that state inspectors issued one NOV for roughly every 16.26 complete inspections and 34.67 partial inspections,⁴² a simple calculation suggests that 132 violations went uncited due to the failure of the states to conduct the requisite number of inspections. The number of NOVs issued during the past 10 years could have been nearly 40 percent greater had the state agencies complied with clear regulatory requirements.

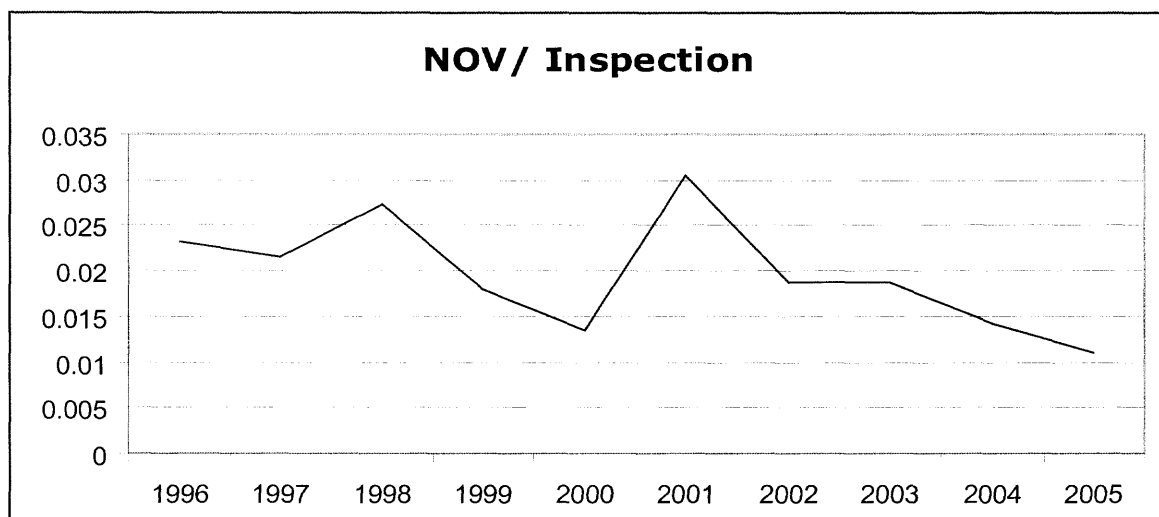


Individual state performance

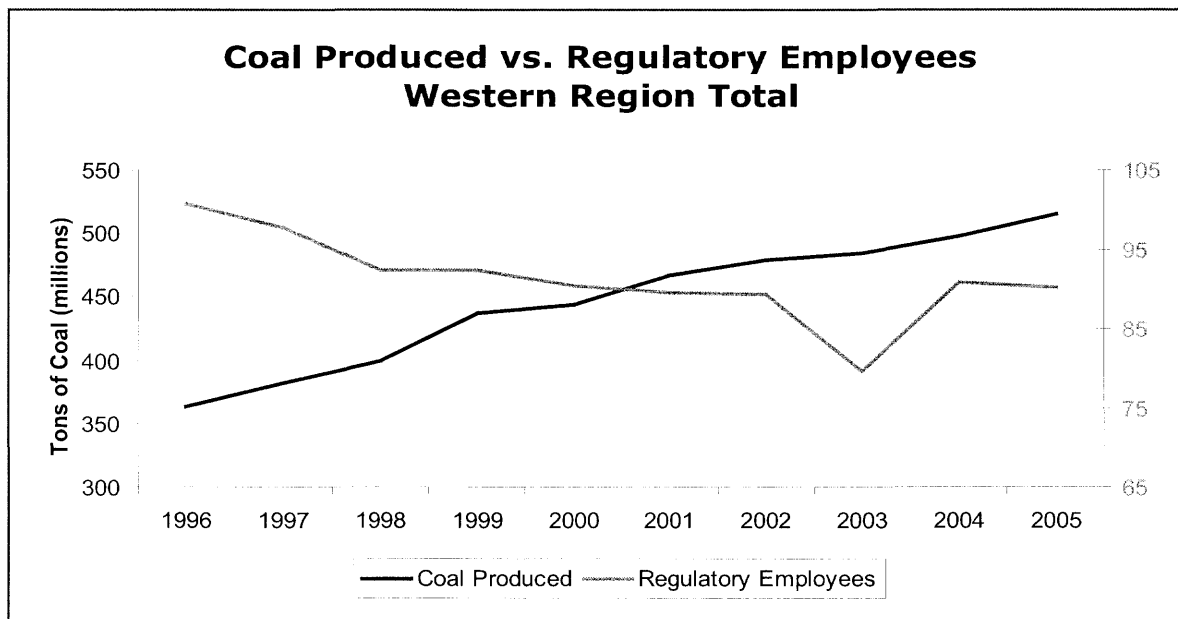
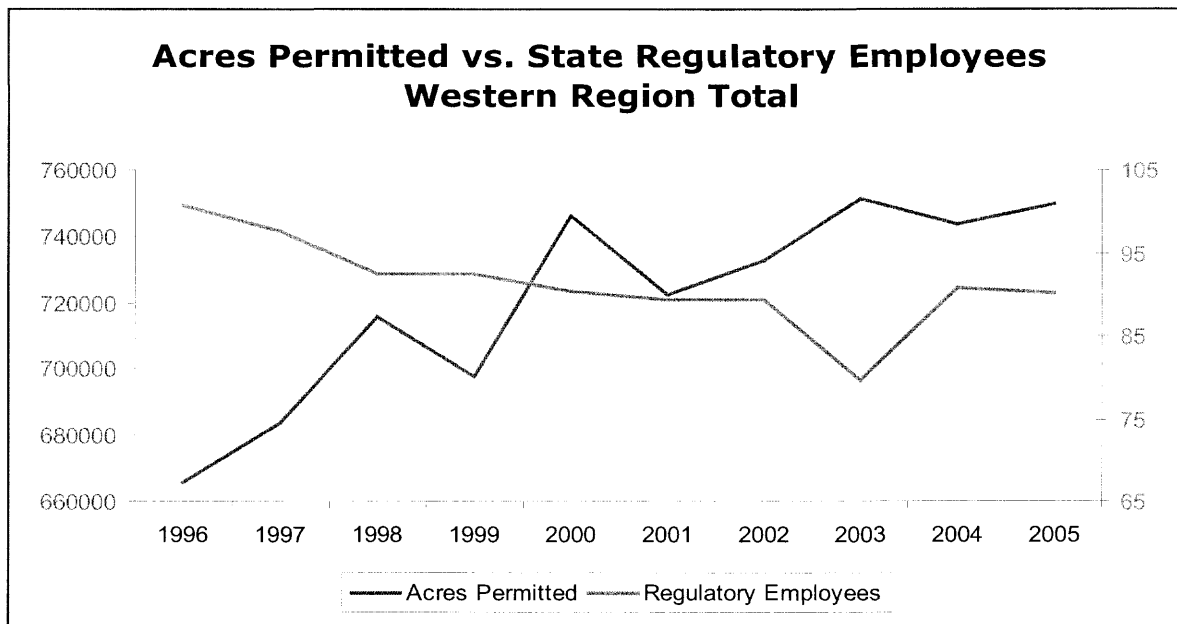
While every state of the five on which we focused failed to conduct the required number of inspections in at least one year, Wyoming was the principal offender. It accounted for 75 percent of all missed complete inspections and 60 percent of all missed partial inspections.⁴³ Wyoming also mined three times more coal than the four other western states combined and has the most acres permitted for mining—currently just under 350,000 acres, making it the state most in need of an adequate enforcement regime.⁴⁴ North Dakota was the best performer overall: The state violated OSM's inspection requirements only once during the seven years for which data were available.⁴⁵ In addition, North

Dakota carried out the most inspections of all five states—6,864 since 1996.⁴⁶ The state achieved this record despite the fact that its agency had only about nine full-time-equivalent employees (FTEs).⁴⁷ In contrast, Wyoming, which had roughly the same number of “inspectable units”—i.e., active and inactive mines—as North Dakota, had approximately 30 FTEs.⁴⁸

While North Dakota’s inspection record was the best during the years 1996 to 2005, the state issued very few NOVs. In fact, North Dakota issued only nine NOVs in 10 years,⁴⁹ the fewest of the five states. In comparison, Wyoming, which carried out the third-highest number of inspections, issued 118 NOVs.⁵⁰ Colorado, which had the second-highest number of inspections, issued the most NOVs over the 10-year period, 157.⁵¹ Wyoming was second in number of NOVs, followed by Montana, New Mexico, and North Dakota.⁵²

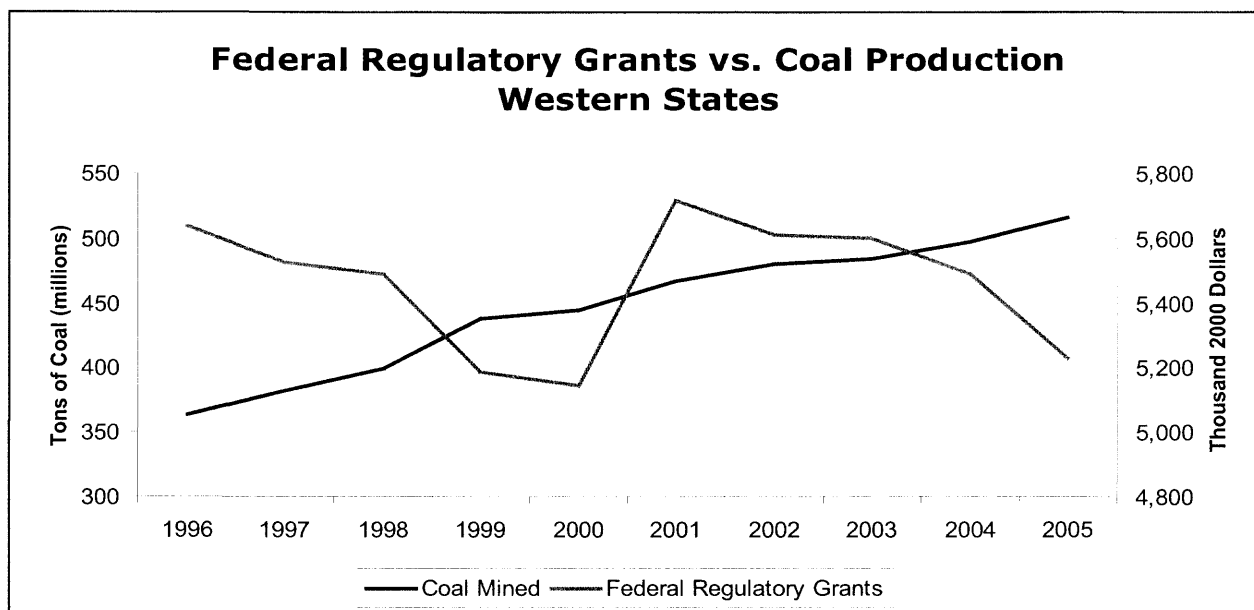


According to the available data, the number of violations detected per inspection appears to have decreased since 1998, even as the amount of coal mined and the number of acres permitted has grown. While the published data do not point to clear causes of this decrease, the oversight reports and other sources suggest a number of potential causes. First, inspections may not be sufficiently thorough, and inspectors may be missing or ignoring violations. Both of these problems were widespread in the early years after SMCRA was enacted.⁵³ Oversight reports issued over the past 10 years suggest that the problem of ignoring violations still exists.⁵⁴ In addition, because states “have the right to amend their programs,” subject to OSM approval,⁵⁵ they can—and do—change their rules to permit practices that previously were not allowed.⁵⁶ Staffing of state agencies is also a major issue.



Not enough state regulatory employees

To carry out the required number of inspections in North Dakota, its regulatory staff had to average more than 75 inspections per employee per year—more than triple the average of any of the other four states in this study. The workload of North Dakota’s regulatory staff is related to another current problem with SMCRA’s enforcement regime: the declining number of state regulatory employees. The combined regulatory staff of the five western states fell by 10 percent between 1996 and 2005.⁵⁷ Over the same period, western coal production increased by 42.8 percent⁵⁸ on acreage that expanded by 12.6 percent.⁵⁹



Thus, regulatory staff numbers have declined at the same time that regulatory demands have increased. Also between 1996 and 2005, federal grants to the state regulatory programs have fallen by just over 7 percent (adjusted for inflation).⁶⁰

Federal Employees

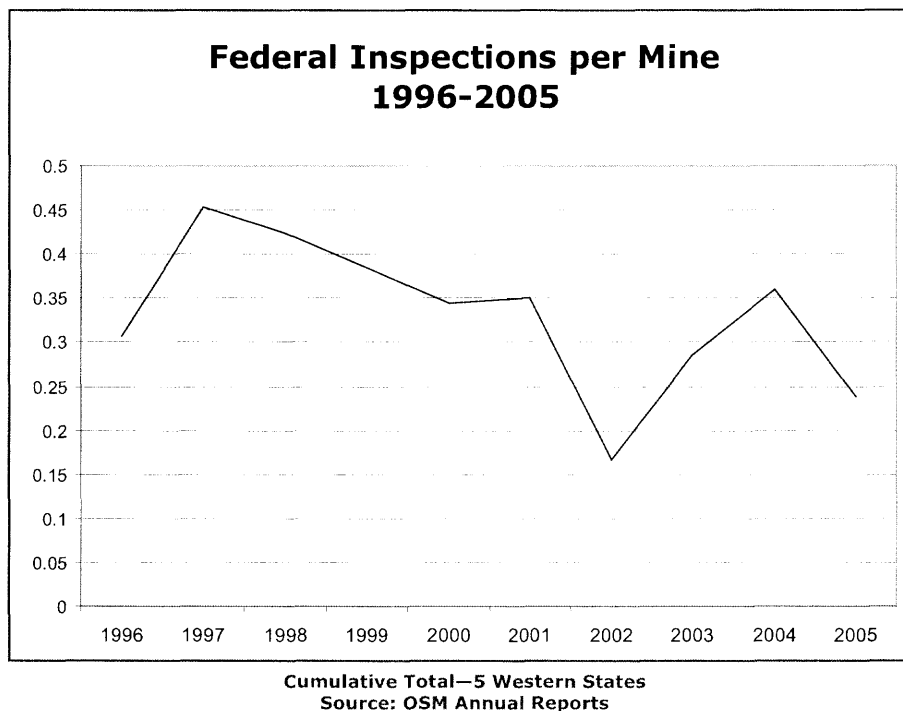
OSM too has seen its oversight funding decline. Between 1997 and 2005, the agency's budget for "environmental protection," which includes funding for state program evaluation, fell by almost 18 percent in inflation-adjusted dollars.⁶¹ As funding decreased, the agency's state program evaluation staff was reduced: Between 2000 and 2005, the staff went from 91 FTEs to 82 FTEs.⁶² A longtime agency staffer has said that, principally as the result of these cuts, the agency no longer has "an educated, trained enforcement group."⁶³ The data are consistent with this assertion.

Over the past 10 years, OSM has inspected about one-third of all mines—active and inactive—per year in Wyoming, Montana, North Dakota, Colorado, and New Mexico.⁶⁴ In all, the agency has done less than 3 percent of the number of inspections the states have done each year, and the total number of annual inspections has never returned to its highest point in this period, which occurred in 1997—even though, as noted, the amount of coal produced and the acreage disturbed by mining activities has increased.

Federal "Environmental Protection" Budget

Data from OSMRE annual Reports

Year	Unadjusted	2000 dollars
1997	21,977,000	24,252,289
1998	18,983,000	20,614,034
1999	19,284,000	20,505,622
2000	19,792,404	20,220,007
2001	20,884,396	20,533,075
2002	21,168,965	20,379,415
2003	21,443,704	19,934,321
2004	22,028,299	19,881,328
2005	22,983,351	19,888,108
Total	188,545,119	186,208,200



Even more disturbing than the number of inspections carried out by OSM is the fact that, according to its published data, the agency has issued a total of only four 10-day notices since 1996: two in Wyoming in 1999, one in that state in 2000, and one in Colorado in 2000.⁶⁵ Policy changes made by OSM over the past 10 years have contributed to this questionable enforcement record.

In particular, in 1999 OSM officials revised an internal agency directive, significantly eroding the independence and oversight ability of the agency's field staff. This directive, REG-8,⁶⁶ governs the oversight of state regulatory programs by OSM field offices. In order to assess state regulatory programs accurately, OSM must perform objective, thorough, and independent evaluations of those programs. Yet, under the terms of REG-8, however, such evaluations can rarely, if ever, take place.

REG-8 directs that inspections—"an integral part of OSM's oversight activities"⁶⁷—"be planned and designed to meet the overall objectives of the Field Office's oversight plan as specified in the evaluation plan/performance agreement." It further directs that "OSM and the states will develop evaluation plans/PAs [together],"⁶⁸ and it encourages the agency and the states to include in these performance agreements, or PAs:

- [T]opics or areas where program evaluations will be conducted [by OSM] and measures or levels of success;
- Identification of the type and number of OSM oversight inspections and/or site visits and the purposes or objectives of those inspections/site visits; [and]
- Summaries and conclusions of any completed or *planned* internal reviews of the state program.⁶⁹ [emphasis added]

These instructions have two implications: First, the states are forewarned of the inspections and/or reviews OSM will make each year. Second, because OSM develops the PAs in conjunction with the states, states effectively have veto power over federal inspections and reviews, thereby seriously undermining the utility of these reviews.

REG-8 also explicitly weakens how off-site impacts—one of the national performance measures that OSM requires—are identified and measured.⁷⁰ First, REG-8 states that “the best source of data about off-site impacts are derived from State inspections,”⁷¹ thus discouraging the use of data from independent sources to determine these impacts. Second, REG-8 narrows the definition of “off-site impact” to exclude impacts that are not prohibited by the state program, including in particular failures of design standards. Specifically, it states:

[I]f a rainfall event that exceeds the design standard causes the sediment control structure to discharge water that does not meet effluent limits resulting in off-site impacts...an off-site impact would not be recorded because all program requirements were met.⁷²

The design standards for siltation structures and impoundment structures, set forth in 30 C.F.R. §§ 816.46 and 816.49, respectively, are intended to prevent such discharges. Amended and revised 17 times since their original promulgation in 1979, the specific technical criteria that the regulations once contained have been largely replaced with subjective standards that allow mining companies broad leeway in constructing and operating these structures. Similarly, the directive provides that “[d]ust from coal stockpiles or spoil piles may annoy local residents, but dust may not be regulated by the State program,” and consequently would not constitute an off-site impact.⁷³ By its terms, REG-8 has created a major loophole for this critically important category of mining impacts.

In fact, according to annual oversight reports, there have been relatively few instances of reportable off-site impacts of any kind, including impacts caused by effluents.⁷⁴ However, because REG-8’s language effectively defines away many if not most off-site impacts, these reports may be painting a false picture of the states’ success in preventing off-site problems⁷⁵—a possibility that is further enhanced by REG-8’s subjective guidelines for evaluating “end results.” For instance, the guidelines for defining a “minor” off-site impact are replete with adjectives like *small*, *short*, and *marginally* and lack a single numerical benchmark. The same is true for the definition of “major” impacts, and “moderate” impacts are defined as any impacts that are neither minor nor major.⁷⁶ While the professional staff of OSM and the state regulatory agencies undoubtedly need a measure of discretion to do their work, the leeway provided by REG-8 goes far beyond that, and undermines the mandates for enforcement in SMCRA as well as public confidence in the regulatory agencies.

Reclamation

Assuring reclamation of mined lands to pre-mining conditions or to an approved post-mining beneficial use has always been one of SMCRA’s most important objectives.⁷⁷ Successful reclamation of Western range and farmland requires both re-establishing vegetation on the surface and replacement and restoration of pre-mining water resources.⁷⁸ Western ranchers who have worked with OSM and state regulatory agencies report what might be characterized as a policy of benign neglect towards enforcing

the water protection, replacement and restoration requirements of SMCRA at Western mines.⁷⁹ Despite the importance of protecting and replacing water supplies to the ultimate success of reclamation in the arid West, OSM evaluations of reclamation success focus on revegetation; there are very few references to water resource reclamation.⁸⁰

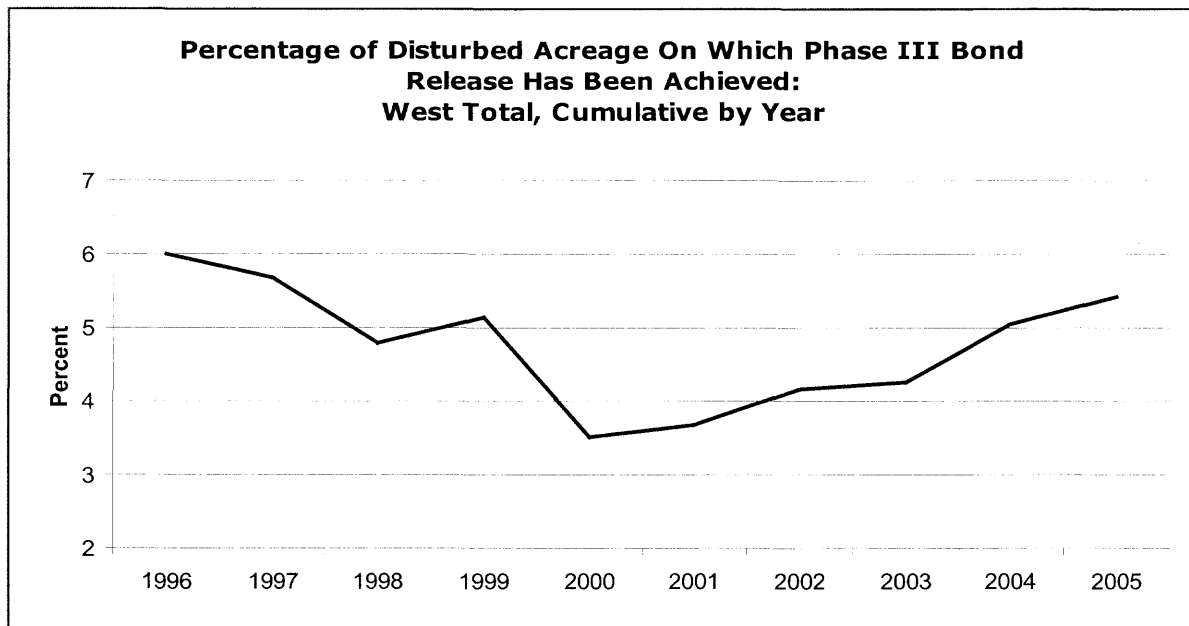
The principal means by which OSM can enforce the statute's reclamation mandate is by requiring that coal mining companies post performance bonds for permit areas.⁸¹ The number of acres that meet bond release standards and for which bonds have finally been released is the agency's national measure of reclamation success.⁸² While the bonds can be forfeited to the regulatory agencies to cover reclamation costs if the mining companies fail to reclaim properly, they are intended to encourage companies to do the reclamation work necessary to achieve Congress' reclamation goals themselves and thus get their bond monies back.

Performance bonds are typically released in three phases⁸³ as reclamation proceeds. Phase I bond release occurs upon the completion of backfilling and grading of mined areas to their "approximate original contour" and replacement of topsoil. Phase II bond release requires erosion prevention and reseedling of disturbed terrain. Phase III bond release is granted once revegetation standards have been met, pre-mining productivity has been reestablished, and pre-mining surface and groundwater quality and quantity (including groundwater recharge capacity) have been restored. Given the paramount role bonding plays in the Act's strategy for achieving reclamation, it is essential that bond amounts be calculated so as to provide sufficient incentive for mining companies to reclaim, as well as to cover the cost of reclamation activities in the case of bond forfeiture. OSM's published data reveal that, as measured by the agency's own standard of reclamation success—i.e., the number of acres of land affected by mining operations that have been released from bonds⁸⁴—bonding has not achieved its goal. The data also reveal that the western states have failed to comply with SMCRA's mandate to reclaim mined land as contemporaneously as possible.⁸⁵

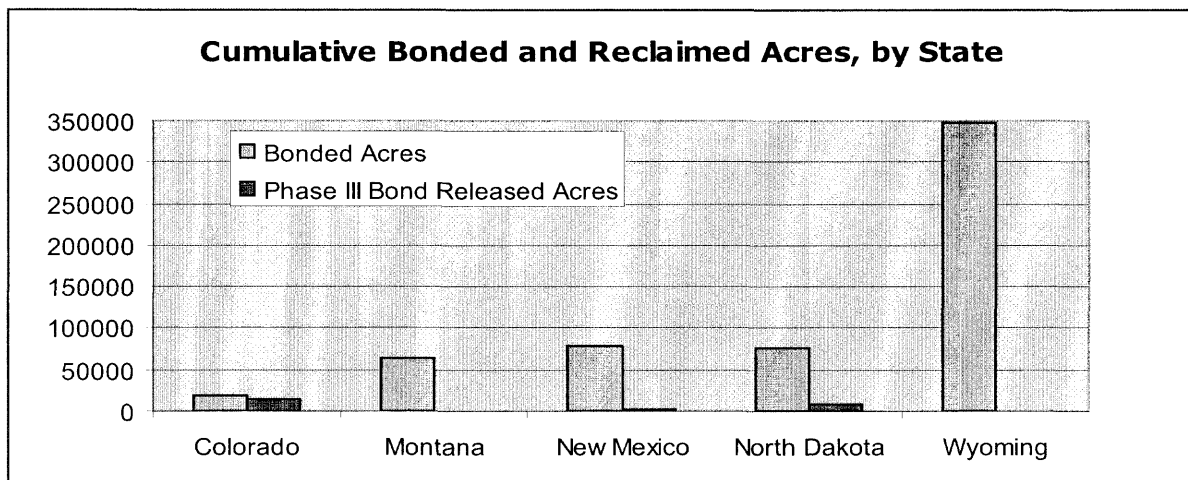
In enacting SMCRA, Congress explicitly recognized the difficulty of reclaiming strip-mined land in the West due to the arid climate.⁸⁶ Consequently, OSM's rules for the West require 10 full years following the completion of mining to prove revegetation success before the final phase of land reclamation can be deemed complete and the bond released.⁸⁷ Even considering this ten-year minimum before achieving Phase III bond release in the West, the pace at which reclamation has proceeded could not be described as "contemporaneous" under almost any definition,⁸⁸ and certainly not under the definition of the term that OSM uses in its reports—namely a one-to-one ratio of mined acreage to reclaimed acreage.⁸⁹

Reclamation using OSM's definition

During the 10-year period covered by this report, a total of 22,905.54 acres were released from Phase III bonds as fully reclaimed in all five western states.⁹⁰ During the same period of time, roughly 400,000 acres were affected—or "disturbed," as OSM says—by coal mining in these states.⁹¹ In other words, for every acre reclaimed in the West between 1996 and 2005, roughly 17 acres were affected by mining. While far from the balance that Congress expected, this ratio in fact represents an improvement over years past. During the five-year period between 1996 and 2000, approximately 35 acres were mined for every acre reclaimed.⁹² Although Phase I release has no time requirements, unlike Phase III, of the



Source: OSM, 1996-2005 Annual Oversight Reports for Montana, Wyoming, North Dakota, Colorado, and New Mexico



146,637.37 acres affected by mining and reclamation operations in 1996,⁹³ only 40 percent had been released from Phase I bond 10 years later.⁹⁴ Referring to the lack of bond release, and consequently the lack of reclamation success, in North Dakota, OSM's field office in Casper, Wyoming, has said that "there is little motivation for the companies to seek bond release,"⁹⁵ and this is equally true of Montana, Wyoming, Colorado, and New Mexico. It is conceivable that failure to replace damaged water supplies, or uncertainty about the standards for evaluating the success of reclaiming water supplies has deterred mine companies from applying for final bond release.

Colorado stands out from the pack in terms of contemporaneous reclamation as measured by bond release.⁹⁶ According to the Colorado oversight reports, the state has fully released 13,496.09 formerly disturbed acres from bond, with 18,066 disturbed acres remaining as of 2005.⁹⁷ It is the only state to approach a one-to-one ratio of acres reclaimed to acres disturbed (the actual ratio is 1:1.34).

The other four states covered in this report have had much less success in achieving contemporaneous reclamation using OSM's official measure of Phase III acreage released from bond. After Colorado, North Dakota has been the next most successful over the past 10 years, with a ratio of 1:10.5 acres reclaimed to acres disturbed.⁹⁸ New Mexico has fully reclaimed one acre for every 53.7 disturbed in 2005. Wyoming's ratio is 1:555.3 and Montana's is 1:734.6.⁹⁹

OSM has repeatedly recognized the lack of progress the states are making on bond release,¹⁰⁰ as has the fact that the Montana and Wyoming programs in particular "are not effective in facilitating and encouraging bond release" as defined by the agency.¹⁰¹ Agency reports also express concern about the lack of contemporaneous reclamation. In its 2005 Wyoming Annual Oversight Report, for example, OSM noted that, notwithstanding "the intent of SMCRA to assure that" mined land is reclaimed "as contemporaneously as possible," "the gap between the acres disturbed versus reclaimed is widening."¹⁰² It has expressed similar concerns about other states, including Montana.¹⁰³ In Montana, where there are four phases of land reclamation rather than three, only 216 acres have been reclaimed through all four phases out of more than 31,000 acres mined as measured by bond release. Three phases of reclamation have been completed on only 1,500 additional acres.¹⁰⁴

Other reclamation information

Faced with the refusal of coal companies to apply for bond release and the inability or unwillingness of the states to "facilitate" bond releases, the OSM field offices responsible for overseeing the states addressed in this report—in Casper, Wyoming, Albuquerque, New Mexico and Denver, Colorado—have advanced a number of excuses for the dismal record summarized above. These include "the cost of data collection, preparing applications, and notice requirements,"¹⁰⁵ problems relating to bonds¹⁰⁶ such as self-bonding¹⁰⁷ and the minimum 10-year liability period,¹⁰⁸ the large size of the mines, and the policy of mining companies to delay applying for bond release.¹⁰⁹

In addition, these field offices frequently insist that, while the number of reclaimed acres released from bond is relatively small compared to the number of acres mined, thousands of acres have been reclaimed although bonds have not been released.¹¹⁰ They base these assertions on reclamation data provided by the states that do not meet OSM's national performance standards but do present a prettier picture (though still not a picture that has them achieving the desired balance). More specifically, these offices count as "reclaimed" all acreage that *could* receive Phase III release, as well as acreage that has actually received final release.¹¹¹ Using data for "reclaimed" acreage that has not received final release from bond as well as acreage that has, the Casper field office has declared that the ratio of mined land to reclaimed land in Wyoming is "3 to 1." Despite weakening the standard to include acreage that has not yet achieved final bond release, the Casper field office is concerned about this ratio, because "the gap is widening" and "creating a backlog of lands needing reclamation."¹¹² According to similar data for Montana, 14,442 acres of mined land have been backfilled, graded, resoiled, and seeded since 1993 (7,129 acres since 1996) out of a total of 33,694, for a ratio of 1 to 2.33.¹¹³ Using similar data, North Dakota's ratio is 1:1.4.¹¹⁴ In fact, however, not all the areas counted as reclaimed under this approach are eligible for bond release as these reports assumed.¹¹⁵ Since final bond release is an objective and transparent measure of success, it should remain OSM's performance measure. Rather than adopt a new definition, the agency should move to prevent mine companies from indefinitely delaying application for release of their reclamation bonds.

Policy recommendations

Despite the passage of 30 years since SMCRA's enactment, Congress's goals have not yet been achieved. Strip-mined lands are not being fully or contemporaneously reclaimed and strong inspection and enforcement programs are not in place to fulfill the Act's promise to protect communities and the environment. The data that OSM publishes year after year to measure reclamation success and compliance with the Act are problematic. The problems identified in this report can and should be solved.

1. Correct data problems.

It is shocking that OSM does not provide accurate, consistent, and comprehensive information about implementation of SMCRA by federal and state agencies each year. Without such information, concerned citizens, policy makers, and others cannot independently evaluate how well the statute is being carried out on the ground in the nation's coal mining states. The agency pays lip service to the importance of providing high-quality data but has done nothing to correct its data problems. There is no excuse for its failure, year after year, to provide crucially important and relevant information, such as the number of acres affected by mining each year and the number of inspections, by mine type, carried out by each state annually. Nor is there an excuse for significant inconsistencies between annual reports and the reports from which they are supposed to be drawn. The agency should, with public input, draw up a list of the types of information essential to evaluating SMCRA's implementation and commit to publishing all such information. It should put an end to the inconsistent reporting and publishing cycles that now exist, in order to improve the accuracy and utility of the information that is published. Solving these problems would help enhance OSM's accountability to the public for the way it carries out its responsibilities under the Act.

2. Provide more funds to state agencies and OSM.

Increased funding is *not* the complete solution to the serious problems identified in this report. Nonetheless, more money is *part* of the answer. The states face a major funding crisis, which will affect their ability to carry out not only their inspection and enforcement responsibilities, but also other responsibilities, including the proper processing of permit applications. Unless federal funding is increased, the states will be forced to lay off employees or reduce their work hours.¹¹⁶ The quality of the people they will be able to attract to open positions will also likely be affected: If the states cannot offer competitive salaries¹¹⁷ or a reasonable standard of job security,¹¹⁸ top-tier talent will not join their regulatory programs.

Every person with whom NRDC spoke during the course of this study, including OSM staff, expressed concern over the decrease in federal funding and its relation to the quality of state regulatory staffs. In 2006, the state of Montana asked that its oversight report include the following statement:

[T]he long-term issue of adequate federal funding of the program still exists. The Montana Department of Environmental Quality has undergone an extensive period of salary increases, and many coal program staff have been recipients of these increases. A few additional increases will occur or are expected in the near future. In addition, all state employees received an across-the-board raise last year and will receive another one this October. Also, operating costs, such as travel, are increasing. In summary, Montana will need significant (sic) more funding than it received this fiscal year, if it is to have a fully functional staff and operating program.¹¹⁹

Having increased salaries to retain qualified personnel, the state needed increased funding to avoid cutting positions, at a time when more, not fewer, personnel were needed.

The states are not doing enough in the way of inspection and enforcement now, and they clearly will not be able to do more in the future with fewer funds.

The same is true of OSM. The agency's lack of regulatory staff directly impacts its ability to carry out its oversight responsibilities effectively. Because policy changes have also eroded its independence and effectiveness, Congress should require the agency to begin to restore its ability to be an independent and effective overseer by undoing those changes, as a condition of receiving additional funds.

3. Improve the bond release process.

Performance bonds are currently the sole mechanism OSM utilizes to achieve Congress's reclamation goal, and clearly they are not working. Numerous oversight reports over the past decade discuss problems with the current approach to bonding.¹²⁰ Yet OSM has proposed no remedial action. Rather than simply allow the shortcomings of the current approach to be repeated, OSM should address the problem head on.

OSM could impose a timetable by which companies would have to apply for bond release. Deadlines, especially if they were mandatory or waivable only under very limited circumstances,¹²¹ could provide a meaningful incentive to mining companies and help ensure that bond release is not delayed indefinitely. OSM could also raise bond amounts to a level that would be sufficient to motivate mining companies to reclaim mined land, unlike current levels. As OSM has acknowledged on a number of occasions, the current bond levels are too low to produce the desired results.¹²² Significantly increased bond levels for Phase III reclamation might provide sufficient inducement for increased bond release and improved reclamation at all phases. With the rise in energy prices and the projected increase in the profitability of coal mining, it is essential that OSM reform its approach to bonding in order to induce companies to reclaim—otherwise, as the acreage of strip-mined land increases across the West, so too will the gap between the amount of mined land and the amount of reclaimed land.

4. Improve reclamation success.

Unquestionably, OSM must do more to improve reclamation success in these leading western coal states. SMCRA requires that reclamation of mined land be “as contemporaneous as possible,”¹²³ yet as we have seen, contemporaneous reclamation is not happening on the ground in Wyoming, the nation’s leading coal-producing state, or the other western states. Indeed, as we have shown, the record of these states is deplorable, but OSM has been unwilling or unable to do anything to improve the situation. While it is imperative that OSM improve its bonding program, the agency must also set clear standards for reclamation benchmarks and penalize mine operators who fail to reclaim mined land, in order to fulfill Congress’s reclamation goal embodied in SMCRA.

5. Adopt a regulatory definition of “contemporaneous.”

The agency did once have such a definition for the first phase of reclamation—backfilling and grading—but since suspending the regulation in 1992,¹²⁴ it has not even proposed a replacement, leaving agency staff, the states, and the industry without a national statutory or regulatory definition of this key term. A national definition is needed to provide a standard for evaluating and approving mine permit applications, for evaluating the effectiveness of the Act and its enforcement, and to fulfill the premier goal of SMCRA – prompt and effective reclamation of mined land. At the very least, adoption of such a definition would put an end to the status quo in which mining companies essentially get to define “contemporaneous” on a mine-by-mine basis.¹²⁵

6. Strengthen permit terms.

OSM should require that permit terms be written so as to ensure that companies can be held accountable for what they do or do not do with regard to reclamation. Current permit requirements are clearly not adequate for this purpose.¹²⁶

7. Stop issuing permits for new mines or mine expansions in areas where strip-mined land remains unreclaimed after more than 10 years.

Based on 30 years of experience and the dismal lack of reclamation success, OSM, the states, the public, and Congress should acknowledge that there are some areas in the arid West where reclamation cannot be achieved. In enacting SMCRA, Congress noted that strip-mining in the West “will pose difficult and in some cases insurmountable reclamation problems,”¹²⁷ and one of its explicit purposes was to “assure that surface mining operations are not conducted where reclamation as required by [the act] is not feasible.”¹²⁸

Over the past 30 years, hundreds of thousands of acres in Montana, Wyoming, North Dakota, Colorado, and New Mexico have been strip-mined, and only a small fraction has been reclaimed, as judged by the acres for which bonds have been released. Rather than

this being a temporary condition, based on the trends in OSM's published data, it appears likely that these acres will remain unreclaimed indefinitely—or at least until the mining companies decide it is in their interest to reclaim them, notwithstanding SMCRA's purpose of "assur[ing] that...surface areas [are reclaimed] as contemporaneously as possible with the surface coal mining operations."¹²⁹ Rather than merely complaining about the lack of reclamation year after year, OSM should stop issuing permits for new mines or mine expansions in areas where strip-mined land remains unreclaimed after more than 10 years.

8. Require reclamation of water resources.

Water is the lifeblood of the West. No land can be truthfully said to be reclaimed to its premining condition if it does not have water resources that are of as good or better quality and quantity than existed prior to mining. OSM and state agency reports evaluating reclamation success focus almost exclusively on regrading, topsoiling and revegetation, all but ignoring the water resources that are just as critical to success. OSM should analyze mining practices, state and federal policies, and permitting and enforcement activities and identify changes needed to meet the Act's requirement to replace water supplies and restore the hydrologic balance at Western mines.

More Information

Natural Resources Defense Council - www.ndrc.org

Western Organization of Resource Councils - www.worc.org

Appendices to this report can be viewed at www.worc.org/issues/coal/smcra-30.html

Footnotes

- ¹ “Coal: Research and Development to Support National Energy Policy”, National Academies Press, available at <http://www.nap.edu>.
- ² For more information on the environmental problems of coal combustion as well as production, see NRDC’s February 2007 report “Coal in a Changing Climate” (hereinafter “NRDC Coal Report”).
- ³ H.R. Rep. 95-218, 1997 U.S.C.C.A.N. 593 at 1-2.
- ⁴ SMCRA, 30 U.S.C. § 1202, sub§§ (c)-(e).
- ⁵ *Id.* at 3.
- ⁶ AML Coal Data Spreadsheet <http://www.osmre.gov/coal/fy06annrpt78thru06.xls>, Appendix 1 to this report. This and other appendices to this report can be viewed at <http://www.worc.org/issues/coal/smcra-30.html>.
- ⁷ United States Department of Energy. *Annual Energy Outlook 2007* DOE/EIA-0383(2007). February 2007. Accessed online at <http://www.eia.doe.gov/oiaf/aeo/coal.html> on May 14, 2007.
- ⁸ The Surface Mining Control and Reclamation Act applies to the surface effects of underground mining. OSM has interpreted the Act to apply only to surface facilities of underground mines. As noted above, this report analyzes OSM data on reclamation, inspection and enforcement, and therefore does not address the impacts of longwall and other underground mining techniques: surface subsidence, pollution of ground and surface water, and destruction of watersheds, homes, farms and businesses.
- ⁹ See NRDC Coal Report at 7-8.
- ¹⁰ *Id.* at 9. Coal mining in the United States released 2.8 million metric tons of methane into the atmosphere, making up 10 percent of total U.S. methane emissions. DOE/EIA, “Emissions of Greenhouse Gases in the United States 2005.” November 2006.
- ¹¹ NRDC Coal Report at 6, 10.
- ¹² OSM publishes two kinds of annual reports, one on its national coal program, and the other describing the efforts of the states. The reports that present information about OSM’s national program are referred to as “OSM [year] National Report” in this study, and page references are to the section or chapter of each national report that is entitled “Regulation of Active Coal Mines.” The other reports are annual reviews of state performance that are carried out by OSM field office staff. Each of these reports is entitled “Annual Evaluation Summary Report for the Coal Regulatory Program Administered by [state agency name] for Evaluation Year ____.” These state reports are referred to herein as the “[year] [name of state] Annual Oversight Report” to minimize confusion with the agency’s annual national reports.

State oversight reports are issued by “evaluation year,” which ran from October 1 to September 30 of every year (consistent with the federal government’s fiscal year) until 2003. That year, the “evaluation year” was changed to run from July 1 to June 30, with the 2003 oversight reports covering a shortened year because of the switch. OSM’s annual national reports are issued by fiscal year. To avoid confusion, each report is referred to by the year it was issued, and no distinction is made between calendar, fiscal, and evaluation years.
- ¹³ AML Coal Data, Appendix 1.
- ¹⁴ Johnson, Carolyn R., Eric Hildebrandt. “Still Stripping the Law on Coal.” Natural Resources Defense Council. Denver, 1984, p. 3 (hereinafter “Johnson and Hildebrandt, Still Stripping the Law”).
- ¹⁵ 30 U.S.C. § 1201(f).

- ¹⁶ H.R. Rep. 95-218, 1977 U.S.C.C.A.N. 593 at 4.
- ¹⁷ See 30 U.S.C. § 1211(c).
- ¹⁸ See *id.*, §§ 1253, 1267(a).
- ¹⁹ See OSM 2006 National Report at 28. In 2000, only Colorado, North Dakota, and Wyoming had entered into cooperative agreements to manage the federal lands within their borders. See 2000 OSM Annual Report at 27.
- ²⁰ See *infra*, at note 39.
- ²¹ 30 U.S.C. § 1254(a)(3).
- ²² See, e.g., Johnson and Hildebrandt, “Still Stripping the Law”: NRDC Coal Report at 22-23.
- ²³ Pers. comm., OSM staff, March 12, 2007.
- ²⁴ For purposes of this report, we have assumed that, overall, the data OSM publishes are reliable. In fact, however, a number of individuals with many years of experience with SMCRA, OSM, and the coal mining industry raised questions about the reliability of the agency’s data, and, as discussed herein, we found serious data problems.
- ²⁵ See, e.g., Table 8, OSM 1995–1997 National Reports.
- ²⁶ Compare OSM 2003 National Report, Table 10 at 28, with 2000 National Report, Table 10 at 26, and 2002 National Report, Table 10 at 27. Given the lack of consistently available data on disturbed acreage, this report uses as a substitute “bonded acreage.” This is defined in every state annual oversight report as the “acreage...considered to approximate and represent the number of acres disturbed by surface coal mining and reclamation operations” and to comprise “those [acres] that have not received a Phase III or other final bond release.” See, e.g., 2006 Montana Annual Oversight Report, App. A., Table 5 at T-5, notes A and B.
- ²⁷ See 30 C.F.R. § 840.11.
- ²⁸ See, e.g., OSM 2004 National Report, Table 10 at 38 (total number of “complete inspections” and “partial inspections” by state without regard to type of mine).
- ²⁹ Colorado oversight reports have inspection data by mine type for 2001, 2002, 2004, and 2005. Montana oversight reports have these data for 1999 through 2005. New Mexico reports have these data for 2001 through 2005. North Dakota reports have these data for 1999 through 2005. Wyoming reports have data for 1999 through 2005.
- ³⁰ E-mail communication with Michael Gauldin, chief of the Office of Communications, OSM, March 14, 2007, on file in the San Francisco office of NRDC. As noted above at note 19, all five states that are the subject of this report have “regulatory primacy.”
- ³¹ See tables in Appendix 2 to this report. We compared data for Phase I acreage reclaimed, Phase II acreage reclaimed, Phase III acreage reclaimed, “acreage disturbed,” and acres permitted, published in 1996 through 2005 national reports, with corresponding data in state annual oversight reports. In all instances save “acreage disturbed,” the figures in the state oversight reports were identically categorized. We used “bonded acreage” figures drawn from Table 5 in each state oversight report to compare with the “acreage disturbed” figures in the national reports for the reason provided in note 27 *supra*. Any inconsistency smaller than 10 acres was considered a rounding error and was not counted as an inconsistency.
- ³² The methodology used in making this comparison was identical to that described immediately above. See tables in Appendix 2 to this report.
- ³³ E-mail communication with Michael Gauldin, note 31 *supra*.
- ³⁴ H.R. Rep. 95-218, 1997 at 129.

- ³⁵ 30 C.F.R. §§ 840.11(a) and (b). See box *infra*.
- ³⁶ See 30 U.S.C. § 1267(e), where there is no imminent danger to health or safety or significant environmental harm. A cessation order must be issued if the violation is not abated within the time specified.
- ³⁷ See *id.* § 1267(h)(2); 30 C.F.R. § 842.11(a).
- ³⁸ 30 U.S.C. § 1271(a)(1); 30 C.F.R. § 843.12(a)(2). These notices are known as 10-day notices or TDNs. Inspectors must issue a cessation order in the event of an imminent danger to health and public safety or significant environmental harm, or under other similarly severe circumstances, 30 C.F.R. § 843.11, and can suspend or revoke mining permits for patterns of violations, *id.*, § 843.12(a)(1). A violation can involve anything from an administrative error, such as an inaccurate address on a sign, to a serious public danger, such as an unstable highwall that threatens to collapse on mine workers.
- ³⁹ As stated above, 40 percent of the reports published from 1996 to 2005 lacked this information. See text at note 30 *supra*.
- ⁴⁰ See tables in Appendix 3 to this report.
- ⁴¹ See tables in Appendix 4.
- ⁴² See Appendix 3, Wyoming table and West Region table.
- ⁴³ See Appendix 1 table; OSM 2005 National Report, Table 10 at 4.
- ⁴⁴ See North Dakota table in Appendix 3.
- ⁴⁵ See North Dakota table in Appendix 4.
- ⁴⁶ See, e.g., OSM 2005 National Report, Table 10 at 4. As OSM has noted, “North Dakota’s regulatory program is handled by a relatively small number of staff...considering the amount of land mined and reclaimed each year.” OSM 2005 North Dakota Oversight Report at 3.
- ⁴⁷ OSM 2005 National Report, Table 10 at 4.
- ⁴⁸ See North Dakota table in Appendix 4.
- ⁴⁹ See Appendix 4, Wyoming state table. Wyoming carried out 4,000 inspections from 1996 to 2005.
- ⁵⁰ See *id.*, Colorado state table. Colorado carried out 5,584 inspections.
- ⁵¹ See *id.*, state tables. On average, Colorado, Montana, New Mexico, and Wyoming collectively issued one NOV for every 37.8 inspections. North Dakota, in contrast, issued one NOV for every 762 inspections.
- ⁵² See Johnson and Hildebrandt, “Still Stripping the Law,” at 112. Published only seven years after passage of SMCRA, this report documented that observed violations were being ignored by inspectors, even though the act requires that enforcement actions be taken in response to any violation, and that regulatory authorities were not conducting thorough inspections.
- ⁵³ See, e.g., 2005 Montana Annual Oversight Report at 11, noting that the state was not requiring mine companies to comply with its approved regulations “in two important areas.” See also 2001 Montana Annual Oversight Report at 12 (regulatory requirements for contemporaneous reclamation not being implemented).
- ⁵⁴ OSM 1996 National Report at 1. Montana has availed itself of this right repeatedly: “The state program amendment process in Montana has been ongoing and constant since the Montana program was originally approved by OSM in April 1980.” 2005 Montana Annual Oversight Report at 10.
- ⁵⁵ This has been a particular problem in Montana. Pers. comm., Richard Parks, past chair, Northern Plains Resource Council, June 8, 2007. Thus, for example, as reported in the 2005 Montana Oversight Report at page 11, approved

Montana regulations required mulch on all disturbed areas and seeding and protection of topsoil stockpiles. These requirements were not being complied with and the state agency was not enforcing them in the field because the legislature had approved and promulgated new rules that allowed for suspension of the requirements, even though OSM had not yet approved the new rules.

⁵⁶ OSM 1996-2005 National Reports.

⁵⁷ See Appendix 1, AML coal data.

⁵⁸ OSM 1996-2005 National Reports.

⁵⁹ See Appendix 5, Table "Federal Regulatory Grants by State by Year (adjusted for inflation)." See also Western Interstate Energy Board, "An Impending Crisis for Coal Supplies," Denver, November 2006, at 4 (hereinafter "Western Interstate Energy Board"). SMCRA authorizes OSM to provide grants to states with approved regulatory programs in amounts that do not exceed 50 percent of annual state program costs. See, e.g., OSM 1996 National Report at 4. The statute also authorizes states that administer coal mining on federal lands to receive up to 100 percent of the costs the federal government saves as a result. See, e.g., OSM 2000 National Report at 27.

⁶⁰ Data from OSM 1997-2005 Annual Reports.

⁶¹ Data from OSM 2001-2006 Budget Justifications.

⁶² Pers. comm., OSM staff, March 12, 2007. According to this person, instead of maintaining its enforcement staff, OSM has chosen to fund technology development and transfer operations. The latter give states and the coal industry the "technical information and tools they need to carry out their responsibilities under [SMCRA]." OSM 2005 National Report, Technology Transfer, at 1. Funding for technology development and transfer remained relatively constant in the OSM budget between 1997 and 2005. As funding for environmental protection decreased by \$5 million, the technology development and transfer budget gained \$ 335,000 (in inflation-adjusted dollars). See Appendix 5, "Federal 'Environmental Protection' Budget" and "Federal 'Tech Transfer' Budget" tables.

⁶³ See Appendix 4 tables re. federal inspections by state.

⁶⁴ See *id.* Several additional 10-day notices that were issued by OSM field staff were appealed by the states and overturned by OSM's Western Region Coordinating Center. See, e.g., 2005 Montana Annual Oversight Report at 10 (TDN issued in 2004 overturned on appeal).

⁶⁵ OSM's Directive REG-8, "Oversight of State Programs," was updated most recently on July 26, 1999, and can be accessed online at <http://www.osmre.gov/directiv.htm>. References to REG-8 in this report are always to this most recent version of the directive.

⁶⁶ *Id.* at 1, "Summary of Major Changes," paragraph b.

⁶⁷ REG-8, Appendix I, section D at I-12.

⁶⁸ REG-8 at I-13.

⁶⁹ According to OSM, "[t]he purpose of measuring off-site impacts is to protect the public, property and the environment outside of areas authorized for mining and reclamation activities." OSM, 1998 National Report at 4. OSM announced the adoption of this performance measure in 1998, *id.*, and reported the percentage of active mines free of off-site impacts the following year. See OSM 1999 National Report at 31. The agency has not reported this information in any annual national reports since then, although the state reports provide it. See, e.g., 2006 Montana Annual Oversight Report, Appendix A, Table 4. Reclamation success is another performance measure; as discussed *infra*, OSM publishes only incomplete information on this topic in its annual national reports.

⁷⁰ REG-8 at I-7.

⁷¹ Id. at I-5.

⁷² Id.

⁷³ According to OSM, “because of significant variations between States in the number, size and types of mines, and methods of data collection, data reported under this measure cannot be used for comparisons between States.” REG- 8 at I-4. Totalling the number of off-site impacts identified in Table 4, “Off-site Impacts,” of available annual oversight reports reveals that, since 1996, Colorado has had the most such impacts, 29, followed by Wyoming with 16, Montana with 3, and New Mexico and North Dakota with 2 each.

⁷⁴ Pers. comm., OSM staff, March 12, 2007.

⁷⁵ See, e.g., REG-8 at I-6 – I-7.

⁷⁶ See 30 U.S.C. § 1202 (“It is the purpose of this Act to...assure that adequate procedures are undertaken to reclaim surface areas as contemporaneously as possible with the surface coal mining operations.”). See also H.R.REP. 95-218, 1977 U.S.C.C.A.N. 593 at 4.

⁷⁷ See testimony of Ellen Pfister before the House Natural Resources Committee, July 25, 2007.

⁷⁸ Approved mine permits are described as taking an “opportunistic” approach to water replacement – that is, there is no plan to protect or replace wells or springs potentially or actually disrupted by mining, other than waiting for “time and fate” to do the job. See Ellen Pfister testimony, *id.*

⁷⁹ See generally OSM’s annual state oversight reports.

⁸⁰ 30 U.S.C. § 1259(a):

After a surface coal mining and reclamation permit application has been approved but before such a permit is issued, the applicant shall file with the regulatory authority...a bond for performance payable...and conditional upon faithful performance of all the requirements of this Act and the permit.

See also 30 C.F.R. § 800.11(b)(1):

The bond or bonds shall cover the entire permit area, or an identified increment of land within the permit area upon which the operator will initiate and conduct surface coal mining and reclamation operations during the initial term of the permit.

⁸¹ See OSM, 1998 Annual Report at 12: OSM is also...assuring that the land currently being mined is properly reclaimed. This performance measure is the acreage of land that is released every year by active coal mine operators. This is done through a series of bond releases. The bonds are required to assure that funds are available for reclamation in case the operator fails to reclaim the mined lands.

⁸² Montana’s state program has four phases of bond release. As discussed below, only a fraction of land affected by mining in Montana has been reclaimed through three phases.

⁸³ See note 82 *supra*.

⁸⁴ See 2001 Montana Annual Oversight Report, at 12:

Contemporaneous reclamation will be measured by evaluating the timeliness of Phase I, Phase II, and Phase III bond release. The intent of this measurement is to provide an overall general picture of how successfully reclamation is staying current with mining in the State.

See also REG-8 at I-8.

⁸⁵ See H.R. REP 95-218, 1977 U.S.C.C.A.N. 593 at 3-4.

- ⁸⁶ See 30 C.F.R. 816.11(c)(3): The “period of responsibility shall continue for” 10 full years in areas of 26 inches or less average annual precipitation.
- ⁸⁷ Congress did not provide a definition of “contemporaneous” in SMCRA, and OSM’s regulations do not provide one either—although, prior to 1992, its rules did have a definition of the term in connection with backfilling and grading, part of Phase I. Compare 30 C.F.R. § 816.101 (1991) with subsequent versions. The definition was suspended following a legal challenge brought by industry groups. See 57 Fed. Reg. 33,874 (July 31, 1992).
- ⁸⁸ See, e.g., OSM 1999 Montana Annual Oversight Report at 7; 2000 Wyoming Annual Oversight Report at 8. See also REG-8 at I-9.
- ⁸⁹ See Appendix 2. All data utilized in this section were derived from State Oversight Reports except for pre-1996 phase III bond release statistics, which were derived from OSM’s 20th Anniversary Report.
- ⁹⁰ OSM’s data regarding the acreage of lands “disturbed”—i.e., affected by strip-mining and other mining activities—suffer from two problems. First, as noted above, OSM has failed to consistently provide data regarding “disturbed acreage” in its annual national reports. See note 27 *supra*. As explained previously at *id.*, in the absence of “disturbed acreage” figures, we used “bonded acreage” figures provided in annual state oversight reports for the years 1996 to 2005 because this acreage “is considered to approximate and represent the number of acres disturbed by surface coal mining and reclamation operations” and comprises “those [acres] that have not received a Phase III or other final bond release.” 2006 Montana Annual Oversight Report, Appendix A, Table 5, notes A and B. Second, it is impossible to determine exactly how many acres were disturbed because no bonded acreage data were included in the 1996 Colorado Annual Oversight Report, and New Mexico’s 1996 report cannot be located. Where necessary, NRDC averaged the totals of the previous and succeeding years to make up for these omissions.
- ⁹¹ See Appendix 2.
- ⁹² The total is actually larger, as the reported figure is missing acreage totals for Colorado and New Mexico. See note 91 *supra*.
- ⁹³ See Appendix 2.
- ⁹⁴ OSM 1999 North Dakota Annual Oversight Report at 7.
- ⁹⁵ Colorado’s reported reclamation statistics have been better than those of the other states studied in this report for many years. See, e.g., Colorado Annual Oversight Reports for 1999, 2000, 2001, 2002, and 2003 at pages 10, 10, 13, 12 and 6, respectively.
- ⁹⁶ See Appendix 2, Colorado table.
- ⁹⁷ See *id.*, North Dakota table. Industrial use is the single-largest post-mining land use for North Dakota’s reclaimed acres, accounting for at least 2,200 acres, according to the OSM 2005 North Dakota Annual Oversight Report.
- ⁹⁸ See Appendix 2, New Mexico, Wyoming, and Montana tables. In its 2001 Montana Annual Oversight Report at pages 4-5, OSM acknowledged the ineffectiveness of that state’s reclamation program:
- Less than 15% of the disturbed lands have received Phase I & II release, and no lands have received Phase III final release. Based on these numbers and the guidance from REG-8, the CFO believes that the Montana program is not effective in having all disturbed lands reclaimed to the approved post-mining land use contemporaneously.
- ⁹⁹ See, e.g., OSM 2001 Montana Annual Oversight Report at 5; 2003 North Dakota Annual Oversight Report at 5; Wyoming Annual Oversight Reports for 2002, 2003, and 2004 at pages 9, 8, and 8, respectively. The Wyoming reports for both 2003 and 2004 note (at page 8) not only the lack of bond releases, but also that the industry is trying to change performance requirements for release, rather than actually moving forward with bond release applications.
- ¹⁰⁰ See OSM 2001 Montana Annual Oversight Report at 4; 2004 Wyoming Annual Oversight Report at 8.

- ¹⁰¹ See OSM 2005 Wyoming Annual Oversight Report at 7. See also 2004 Wyoming Annual Oversight Report at 11; 2006 Wyoming Annual Oversight Report at 9.
- ¹⁰² See, e.g., OSM 2006 Montana Annual Oversight Report at 7 (the state's program is "only partially effective in its goal of having all disturbed lands reclaimed to the approved post-mining land use as contemporaneously as possible").
- ¹⁰³ See Western Organization of Resource Councils, Memorandum to NRDC, March 10, 2006, citing Montana Department of Environmental Quality 2006 Annual Report, on file in NRDC's San Francisco office.
- ¹⁰⁴ OSM 2003 North Dakota Annual Oversight Report at 5.
- ¹⁰⁵ See, e.g., *id.* (bonding based on "worst case" reclamation scenario that provides no incentive to industry to apply for Phase I and II bond release).
- ¹⁰⁶ *Id.*
- ¹⁰⁷ See OSM 2000 Colorado Annual Oversight Report at 10.
- ¹⁰⁸ OSM 2005 Wyoming Annual Oversight Report at 6; 2002 Wyoming Annual Oversight Report at 6; 1996 Colorado Annual Oversight Report at 8; 1997 Colorado Annual Oversight Report at 9; 2000 Colorado Annual Oversight Report at 10; 1999 Montana Annual Oversight Report at 4.
- ¹⁰⁹ OSM 2003 North Dakota Annual Oversight Report at 4 ("There are thousands of acres that have been mined and totally reclaimed"); 2002 Wyoming Annual Oversight Report at 6 (The "number of acres released from bond is relatively small," yet thousands of acres have been backfilled and graded and some of that is topsoiled and seeded "for a minimum of 10 years"); 1996 Montana Annual Oversight Report at 3 ("Although the number of acres released from bond is minimal, a substantial amount of reclamation has occurred").
- ¹¹⁰ See, e.g., OSM 2002 Wyoming Annual Oversight Report at 6 (counting acreage that "may be eligible" for Phase III release); 2004 Colorado Annual Oversight Report at 7 (counting acreage the "[t]eam believes...would meet the phase III bond release requirements"); 1996 North Dakota Annual Oversight Report at 8.
- ¹¹¹ OSM 2005 Wyoming Annual Oversight Report at 9. See also 2002 Wyoming Annual Oversight Report at 23.
- ¹¹² OSM 2006 Montana Annual Oversight Report, Appendix A, Table 6. Previously OSM expressed concern about a lower ratio but announced that "this issue is mine-specific" and would not be "investigate[d]" "on an industry or statewide basis." 1998 Montana Annual Oversight Report at 6.
- ¹¹³ OSM 2006 North Dakota Annual Oversight Report, Appendix A., Table 6 at T-6 (ratio arrived at by subtracting "Long-Term Facilities" and "Active Mine Areas" from total "Disturbed area" and dividing that number by the sum of "Phase III (veg. est.) Bond Release," "Areas Seeded for 10 years" and "Final Bond Release"). The resulting ratio is almost as good as Colorado's using the agency's official national definition. See note 97 *supra*.
- ¹¹⁴ See, e.g., OSM 2003 North Dakota Annual Oversight Report at 5 (In connection with inspection of three bond release request areas, "[t]here appear to be large areas...which would be eligible for bond release. However, upon closer examination we found conditions that preclude bond release.").
- ¹¹⁵ Western Interstate Energy Board at 4.
- ¹¹⁶ *Id.* at 5.
- ¹¹⁷ OSM 2006 Montana Annual Oversight Report at 15.
- ¹¹⁸ *Id.* at 14-15.

¹¹⁹ See, e.g., OSM 2003 North Dakota Annual Oversight Report at 5 (“bonding based on worst case scenario provides no incentive to submit applications for Phase I and II bond release”) and at 30 (self-bonding a problem); 2004 Wyoming Annual Oversight Report at 10 (“increase[d] costs may be the only way to achieve higher bond releases”).

¹²⁰ State programs have deadlines for reclamation activities, but they also provide for variances, extensions, and temporary cessations of these activities. As the 2001 Montana Oversight Report noted at page 12:

[OSM] has concluded that the use of variances to contemporaneous reclamation and temporary cessation, while consistent with the approved State program, is delaying reclamation and is contributing to a delay in bond release.

¹²¹ See, e.g., note 109 *supra*.

¹²² SMCRA, 30 U.S.C. § 1202(e).

¹²³ See note 88 *supra*.

¹²⁴ On February 12, 2007, NRDC spoke with an OSM regulatory employee who said that the reclamation schedules set out in mining permits now define what contemporaneous reclamation is.

¹²⁵ They may be inadequate for other purposes as well. See, e.g., OSM 1997 Wyoming Annual Oversight Report noting that permits lacked detailed time schedules for backfill and grading and were confusing and contradictory, and thus were not properly written.

¹²⁶ H.R. REP. 95-218, 1977 U.S.C.C.A.N. 593 at 3.

¹²⁷ 30 U.S.C. § 1202(c).

¹²⁸ 30 U.S.C. § 1202(e).